

slip March 20!

Work Order ID 114026

March-03-14 10:14:31 AM

\*114026\*

Page 1

Item ID: D3499-3

Accept

\*N900040100\*

Setup Start

\*NS1\*

Revision ID:

Item Name: Plastic Cable Guard

Start Date: 3/03/14 Start Qty: 8.00

\*8\*  
\*8\*

10

Required Date: 3/17/14 Req'd Qty: 8.00

Cust Item ID:

Customer:

Reference:

Approvals: Process Plan: ML5

Date: 14-03-03

Tooling: \_\_\_\_\_ Run Start \*NR1\*

QC: \_\_\_\_\_

Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

Stop

\*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								

100

\*100\*

FLOW WATER JET

Waterjet

Memo

0.00

10 Q 14-3-8

FLOW CNC Waterjet

1-Cut as per Dwg D3499

Dwg Rev: C

Prog Rev: C

2-Deburr if necessary

110

QC2- Inspect parts off machine FAI/FAIB

0.00

\*110\*

QC

Quality Control

0.00

10 Q 14-3-8

120

\*120\*

HAAS CNC VERTICAL MACHINING #1

HAAS 1

HAAS CNC vertical machine #1

Memo

0.00

1- Mill as per Folio FA636 Rev: A & Dwg D3499 Rev: C  
2-Deburr per dwg D3499

on 14/03/12

10 Q

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only 

Work Order: _____	DISPOSITION			AGAINST DEPARTMENT/PROCESS						
Part No. _____	Rework	<input type="checkbox"/>	Skid-tube	<input type="checkbox"/>	Crosstube	<input type="checkbox"/>	Water Jet	<input type="checkbox"/>	Engineering	<input type="checkbox"/>
NCR No. _____	Scrap	<input type="checkbox"/>	Machining	<input type="checkbox"/>	Small Fab	<input type="checkbox"/>	Prod. Eng. Coor.	<input type="checkbox"/>	Quality	<input type="checkbox"/>
	Use-as-is	<input type="checkbox"/>	Thermoforming	<input type="checkbox"/>	Finishing	<input type="checkbox"/>	Rec/Store/Packaging	<input type="checkbox"/>	Other	<input type="checkbox"/>
	Suspected Unapproved	<input type="checkbox"/>	Large Fab	<input type="checkbox"/>	Composite	<input type="checkbox"/>	Supplier	<input type="checkbox"/>		

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

## FAULT CATEGORY

Landing Gear		General									
<input type="checkbox"/>	Bending	<input type="checkbox"/>	Bend	<input type="checkbox"/>	Folio/Program	<input type="checkbox"/>	Outside Dimensions	<input type="checkbox"/>	Pressure/Forced	<input type="checkbox"/>	
<input type="checkbox"/>	Centre Not Concentric	<input type="checkbox"/>	BOM/Route	<input type="checkbox"/>	Grain	<input type="checkbox"/>	Over/Under tolerance	<input type="checkbox"/>	Set-up	<input type="checkbox"/>	
<input type="checkbox"/>	Cracks	<input type="checkbox"/>	Broken/Damage/Defect	<input type="checkbox"/>	Hardware	<input type="checkbox"/>	Part Incorrect	<input type="checkbox"/>	Temperature/Cure	<input type="checkbox"/>	
<input type="checkbox"/>	Crimp/Kink/Ripple/Wave	<input type="checkbox"/>	Burrs	<input type="checkbox"/>	Inspection Incomplete/Unqualified	<input type="checkbox"/>	Part Lost/Missing	<input type="checkbox"/>	Weld	<input type="checkbox"/>	
<input type="checkbox"/>	Cuffs	<input type="checkbox"/>	Contamination	<input type="checkbox"/>	Instructions Incomplete/Unclear	<input type="checkbox"/>	Part Moved	<input type="checkbox"/>	Wrong Stock Pulled	<input type="checkbox"/>	
<input type="checkbox"/>	Crushing	<input type="checkbox"/>	Countersink	<input type="checkbox"/>	Misaligned/off center	<input type="checkbox"/>	Positioned Wrong	<input type="checkbox"/>		<input type="checkbox"/>	Other
<input type="checkbox"/>	Heat Treat	<input type="checkbox"/>	Cut Too Short	<input type="checkbox"/>	Mislabeled	<input type="checkbox"/>	Power Loss/Surge	<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	Inspection Strip in Tube	<input type="checkbox"/>	Drawing	<input type="checkbox"/>	Misread	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	Marks/Chatter	<input type="checkbox"/>	Drill Holes	<input type="checkbox"/>	Off-set	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	Turning Sequence	<input type="checkbox"/>	Finish	<input type="checkbox"/>	Out of Calibration	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	Wave/Twist in Tube	<input type="checkbox"/>	Fit/Function	<input type="checkbox"/>	Out of Sequence	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	

**Work Order ID 114026**

March-03-14 10:14:31 AM

**\*114026\***

Page 2

Item ID: D3499-3

Accept

**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Stop

**\*NS2\***

Item Name: Plastic Cable Guard

Start Date: 3/03/14 Start Qty: 8.00

**\*8\***

Cust Item ID:

Required Date: 3/17/14 Req'd Qty: 8.00

**\*8\***

Customer:

Reference:

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	<b>*NR1*</b>
						Stop	<b>*NR2*</b>
	QC:	Date:	SPC (Y/N):	Date:			

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

130 QC2- Inspect parts off machine FAI/FAIB 0.00

**\*130\***

QC

Quality Control

14/03/12

10 10

DAS  
39  
89

140

**\*140\***

Mill Conv

Conventional Milling Machine

CONVENTIONAL MILLING MACHINE

Memo

0.00

0.00

10

13.03.14

150

**\*150\***

QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

0.00

Memo

0.00

10

13.03.14

DAS  
39  
89

DQA:

Date:



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date:

Work Order update only 

Work Order: _____	<b>DISPOSITION</b>		
Part No. _____	Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>
NCR No. _____	Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Water Jet <input type="checkbox"/>
	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>
	Suspected Unapproved <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>
		Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>

### AGAINST DEPARTMENT/PROCESS

Engineering <input type="checkbox"/>
Quality <input type="checkbox"/>
Other <input type="checkbox"/>

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

Landing Gear		<b>General</b>									
		Bending <input type="checkbox"/>	Bend <input type="checkbox"/>	Folio/Program <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>					
		Centre Not Concentric <input type="checkbox"/>	BOM/Route <input type="checkbox"/>	Grain <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Set-up <input type="checkbox"/>					
		Cracks <input type="checkbox"/>	Broken/Damage/Defect <input type="checkbox"/>	Hardware <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>					
		Crimp/Kink/Ripple/Wave <input type="checkbox"/>	Burrs <input type="checkbox"/>	Inspection Incomplete/Unqualified <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Weld <input type="checkbox"/>					
		Cuffs <input type="checkbox"/>	Contamination <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Moved <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>					
		Crushing <input type="checkbox"/>	Countersink <input type="checkbox"/>	Misaligned/off center <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>						
		Heat Treat <input type="checkbox"/>	Cut Too Short <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>	Other <input type="checkbox"/>					
		Inspection Strip in Tube <input type="checkbox"/>	Drawing <input type="checkbox"/>	Misread <input type="checkbox"/>							
		Marks/Chatter <input type="checkbox"/>	Drill Holes <input type="checkbox"/>	Off-set <input type="checkbox"/>							
		Turning Sequence <input type="checkbox"/>	Finish <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>							
		Wave/Twist in Tube <input type="checkbox"/>	Fit/Function <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>							

Work Order ID 114026

March-03-14 10:14:31 AM

\*114026\*

Page 3

Item ID: D3499-3

Accept

\*N900040100\*

Setup Start

\*NS1\*

Revision ID:

Item Name: Plastic Cable Guard

Stop

\*NS2\*

Start Date: 3/03/14 Start Qty: 8.00

\*8\*

Cust Item ID:

Required Date: 3/17/14 Req'd Qty: 8.00

\*8\*

Customer:

Reference:

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	*NR1*
	QC:	Date:	SPC (Y/N):	Date:	Stop		*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 <b>*160*</b> QC	QC8- Inspect parts - second check	0.00	B-A	14/03/13	10	0			DAS 08 9-89
	Memo	0.00							

170 <b>*170*</b> Packaging	Identify as per dwg & Stock Location:	0.00							17/3/17 (10) DAS 32 9-89
Packaging	Memo	57001A	0.00						

180 <b>*180*</b> QC	QC21- Final Inspection - Work Order Release	0.00							17/4/03/10
Quality Control	Memo	0.00							

17/4/03/10  
17/4/03/10

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Date:



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Date:

## Work Order update only

# Picklist Print

Page 1

March-03-14 10:14:35 AM

Work Order ID: 114026

**\*114026\***

Parent Item: D3499-3

**\*D3499-3\***

Parent Item Name: Plastic Cable Guard

Start Date: 3/03/14

Required Date: 3/17/14

Start Qty: 8.00

Required Qty: 8.00

Comments: IPP Rev:A New Issue 06-05-05 JLM  
IPP Rev:B As per Rev B 06-08-31 JLM  
revC DD 10.02.23 verified by:EC

IPP Rev:C as per dwg

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MUHMWB625		Purchased		No		110	sf	0.0000	1.081	10	**	EL 14-3-8	

**\*MIJHMWB625\***

UHMW .625 Black Tivar 1000

m12438/x 11.42 '

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date:

## Work Order update only

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
			Rework Scrap Use-as-is Suspected Unapproved	Skid-tube Machining Thermoforming Large Fab	Crosstube Small Fab Finishing Composite	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier	Engineering Quality Other				
Part No. _____											
NCR No. _____											
Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Design											
Doc/Data											
Equip/Tooling											
Handling/Pre											
Material											
Operator											
Offset/Setup											
Process											
Supplier											
Training											
Transport											
Unapproved											
FAULT CATEGORY											
Landing Gear			General								
Bending Centre Not Concentric Cracks Crimp/Kink/Ripple/Wave Cuffs Crushing Heat Treat Inspection Strip in Tube Marks/Chatter Turning Sequence Wave/Twist in Tube			Bend BOM/Route Broken/Damage/Defect Burr Contamination Countersink Cut Too Short Drawing Drill Holes Finish Fit/Function								
			Folio/Program Grain Hardware Inspection Incomplete/Unqualified Instructions Incomplete/Unclear Misaligned/off center Mislabeled Misread Off-set Out of Calibration Out of Sequence								
			Outside Dimensions Over/Under tolerance Part Incorrect Part Lost/Missing Part Moved Positioned Wrong Power Loss/Surge								
			Pressure/Forced Set-up Temperature/Cure Weld Wrong Stock Pulled Other								

DART AEROSPACE LTD	Work Order:	114026
Description: Cable Guard	Part Number:	D3499-3
Inspection Dwg: D3499	Rev: C	Page 1 of 1

# FIRST ARTICLE INSPECTION CHECKLIST

Measured by:	<u>A. S.</u>	Audited by:	<u>B. A.</u>	DAS 08	Preliminary Approval:
Date:	14-3-16	Date:	14/03/13	9-09	Date:

Rev	Date	Change	Revised by	Approved
A	06.09.27	New Issue	KJ/JLM	
B	12.05.15	Dimensions updated per Dwg Rev C	KJ	

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Date: \_\_\_\_\_



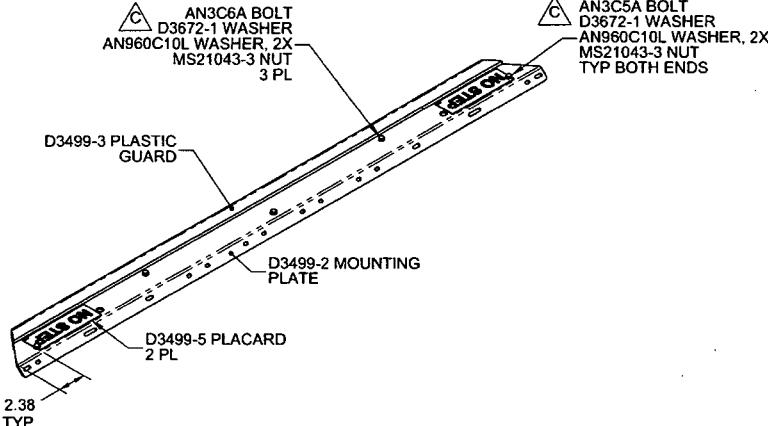
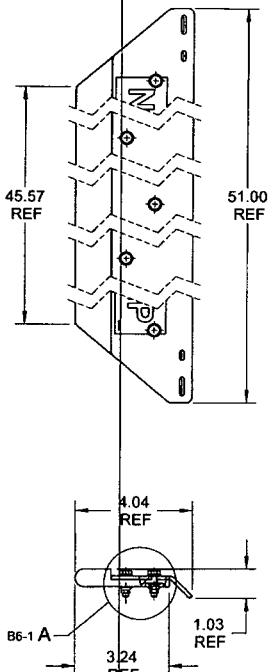
## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Date:

### Work Order update only

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS						
Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>				Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>		Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>		Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>		Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>		
Root Cause		Date	Step	Qty	Description of work order update or non-conformance		Initial Chief Eng	Action Description		Sign & Date	Verification	QC Inspector
Design	<input type="checkbox"/>											
Doc/Data	<input type="checkbox"/>											
Equip/Tooling	<input type="checkbox"/>											
Handling/Pre	<input type="checkbox"/>											
Material	<input type="checkbox"/>											
Operator	<input type="checkbox"/>											
Offset/Setup	<input type="checkbox"/>											
Process	<input type="checkbox"/>											
Supplier	<input type="checkbox"/>											
Training	<input type="checkbox"/>											
Transport	<input type="checkbox"/>											
Unapproved	<input type="checkbox"/>											
FAULT CATEGORY												
Landing Gear				General								
				Bending <input type="checkbox"/>	Bend <input type="checkbox"/>	Folio/Program <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>				
Centre Not Concentric <input type="checkbox"/>	BOM/Route <input type="checkbox"/>	Grain <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Set-up <input type="checkbox"/>								
Cracks <input type="checkbox"/>	Broken/Damage/Defect <input type="checkbox"/>	Hardware <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>								
Crimp/Kink/Ripple/Wave <input type="checkbox"/>	Burrs <input type="checkbox"/>	Inspection Incomplete/Unqualified <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Weld <input type="checkbox"/>								
Cuffs <input type="checkbox"/>	Contamination <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Moved <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>								
Crushing <input type="checkbox"/>	Countersink <input type="checkbox"/>	Misaligned/off center <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>									
Heat Treat <input type="checkbox"/>	Cut Too Short <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>									
Inspection Strip in Tube <input type="checkbox"/>	Drawing <input type="checkbox"/>	Misread <input type="checkbox"/>										
Marks/Chatter <input type="checkbox"/>	Drill Holes <input type="checkbox"/>	Off-set <input type="checkbox"/>										
Turning Sequence <input type="checkbox"/>	Finish <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>										
Wave/Twist in Tube <input type="checkbox"/>	Fit/Function <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>										

8	7	6	5	4	3	2	1																																							
D							D																																							
C							C																																							
B							B																																							
A							A																																							
 <p>AN3C6A BOLT D3672-1 WASHER AN960C10L WASHER, 2X MS21043-3 NUT 3 PL</p> <p>AN3C5A BOLT D3672-1 WASHER AN960C10L WASHER, 2X MS21043-3 NUT TYP BOTH ENDS</p> <p>D3499-3 PLASTIC GUARD</p> <p>D3499-2 MOUNTING PLATE</p> <p>D3499-5 PLACARD 2 PL</p> <p>2.38 TYP</p>	 <p>45.57 REF</p> <p>51.00 REF</p> <p>4.04 REF</p> <p>3.24 REF</p> <p>1.03 REF</p> <p>B6-1 A</p>	<table border="1"> <thead> <tr> <th>ITEM</th> <th>QTY</th> <th>P/N</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>X</td> <td>D3499-042</td> <td>CABLE GUARD ASSEMBLY</td> </tr> <tr> <td>2</td> <td>1</td> <td>D3499-2</td> <td>MOUNTING PLATE</td> </tr> <tr> <td>3</td> <td>1</td> <td>D3499-3</td> <td>PLASTIC GUARD</td> </tr> <tr> <td>4</td> <td>2</td> <td>D3499-5</td> <td>PLACARD</td> </tr> <tr> <td>5</td> <td>2</td> <td>AN3C5A</td> <td>BOLT</td> </tr> <tr> <td>6</td> <td>3</td> <td>AN3C6A</td> <td>BOLT</td> </tr> <tr> <td>7</td> <td>10</td> <td>AN960C10L</td> <td>WASHER</td> </tr> <tr> <td>8</td> <td>5</td> <td>MS21043-3</td> <td>NUT</td> </tr> <tr> <td>9</td> <td>5</td> <td>D3672-1</td> <td>WASHER</td> </tr> </tbody> </table>	ITEM	QTY	P/N	DESCRIPTION	1	X	D3499-042	CABLE GUARD ASSEMBLY	2	1	D3499-2	MOUNTING PLATE	3	1	D3499-3	PLASTIC GUARD	4	2	D3499-5	PLACARD	5	2	AN3C5A	BOLT	6	3	AN3C6A	BOLT	7	10	AN960C10L	WASHER	8	5	MS21043-3	NUT	9	5	D3672-1	WASHER	<p>114026 MJ 14-03-03</p> <p>RELEASED 2010-02-02 IND</p>			
ITEM	QTY	P/N	DESCRIPTION																																											
1	X	D3499-042	CABLE GUARD ASSEMBLY																																											
2	1	D3499-2	MOUNTING PLATE																																											
3	1	D3499-3	PLASTIC GUARD																																											
4	2	D3499-5	PLACARD																																											
5	2	AN3C5A	BOLT																																											
6	3	AN3C6A	BOLT																																											
7	10	AN960C10L	WASHER																																											
8	5	MS21043-3	NUT																																											
9	5	D3672-1	WASHER																																											
<p><b>NOTES:</b></p> <ol style="list-style-type: none"> <li>1) MATERIAL: N/A</li> <li>2) FINISH: N/A</li> <li>3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED</li> <li>4) UNITS: INCHES UNLESS OTHERWISE NOTED</li> <li>5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX</li> <li>6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3499-041/-042" USING FINE POINT PERMANENT INK MARKER</li> <li>7) WEIGHT: 3.91 lbs</li> </ol>	<p><b>DETAIL A B4-1</b> SCALE 4X</p> <p><b>D3499-042 CABLE GUARD ASSEMBLY</b></p>	<table border="1"> <tr> <td>C</td> <td>DRAWING UPDATED TO CURRENT STANDARDS. 3.245 WAS 3.255 (ZN B8-3); 3.24 WAS 3.25 (ZN D3-3); REVISE TOLERANCE 6.201 WAS 2.00 (ZN D3-3); D3672-1 WAS NAS1515H13L (ZN D3-1, D5-1, D7-1); ADD IDENTIFY NOTE (ZN A8-1); REF NCR-09-045</td> <td>RF</td> <td>09.06.19</td> </tr> <tr> <td>B</td> <td>RE-DESIGN D3499-2F/3</td> <td>MB</td> <td>08.06.15</td> </tr> <tr> <td>A</td> <td>NEW ISSUE</td> <td>MB</td> <td>06.04.11</td> </tr> <tr> <td>REV.</td> <td>DESCRIPTION</td> <td>BY</td> <td>DATE</td> </tr> <tr> <td>DESIGN</td> <td><i>AS</i></td> <td colspan="2"><b>DART AEROSPACE USA, INC.</b></td> </tr> <tr> <td>DRAWN</td> <td>R-</td> <td colspan="2">PORT HADLOCK, WA</td> </tr> <tr> <td>CHECKED</td> <td><i>AS</i></td> <td>DRAWING NO.</td> <td>REV. C</td> </tr> <tr> <td>MFG. APPR.</td> <td><i>AS</i></td> <td>D3499</td> <td>SHEET 1 OF 4</td> </tr> <tr> <td>APPROVED</td> <td><i>AS</i></td> <td>TITLE</td> <td>SCALE</td> </tr> <tr> <td>DE APPR.</td> <td><i>AS</i></td> <td>CABLE GUARD</td> <td>NTS</td> </tr> <tr> <td>DATE</td> <td>09.06.19</td> <td colspan="2">COPYRIGHT © 2006 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</td> </tr> </table>	C	DRAWING UPDATED TO CURRENT STANDARDS. 3.245 WAS 3.255 (ZN B8-3); 3.24 WAS 3.25 (ZN D3-3); REVISE TOLERANCE 6.201 WAS 2.00 (ZN D3-3); D3672-1 WAS NAS1515H13L (ZN D3-1, D5-1, D7-1); ADD IDENTIFY NOTE (ZN A8-1); REF NCR-09-045	RF	09.06.19	B	RE-DESIGN D3499-2F/3	MB	08.06.15	A	NEW ISSUE	MB	06.04.11	REV.	DESCRIPTION	BY	DATE	DESIGN	<i>AS</i>	<b>DART AEROSPACE USA, INC.</b>		DRAWN	R-	PORT HADLOCK, WA		CHECKED	<i>AS</i>	DRAWING NO.	REV. C	MFG. APPR.	<i>AS</i>	D3499	SHEET 1 OF 4	APPROVED	<i>AS</i>	TITLE	SCALE	DE APPR.	<i>AS</i>	CABLE GUARD	NTS	DATE	09.06.19	COPYRIGHT © 2006 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	
C	DRAWING UPDATED TO CURRENT STANDARDS. 3.245 WAS 3.255 (ZN B8-3); 3.24 WAS 3.25 (ZN D3-3); REVISE TOLERANCE 6.201 WAS 2.00 (ZN D3-3); D3672-1 WAS NAS1515H13L (ZN D3-1, D5-1, D7-1); ADD IDENTIFY NOTE (ZN A8-1); REF NCR-09-045	RF	09.06.19																																											
B	RE-DESIGN D3499-2F/3	MB	08.06.15																																											
A	NEW ISSUE	MB	06.04.11																																											
REV.	DESCRIPTION	BY	DATE																																											
DESIGN	<i>AS</i>	<b>DART AEROSPACE USA, INC.</b>																																												
DRAWN	R-	PORT HADLOCK, WA																																												
CHECKED	<i>AS</i>	DRAWING NO.	REV. C																																											
MFG. APPR.	<i>AS</i>	D3499	SHEET 1 OF 4																																											
APPROVED	<i>AS</i>	TITLE	SCALE																																											
DE APPR.	<i>AS</i>	CABLE GUARD	NTS																																											
DATE	09.06.19	COPYRIGHT © 2006 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.																																												

8 7 6 5 4 3 2 1

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

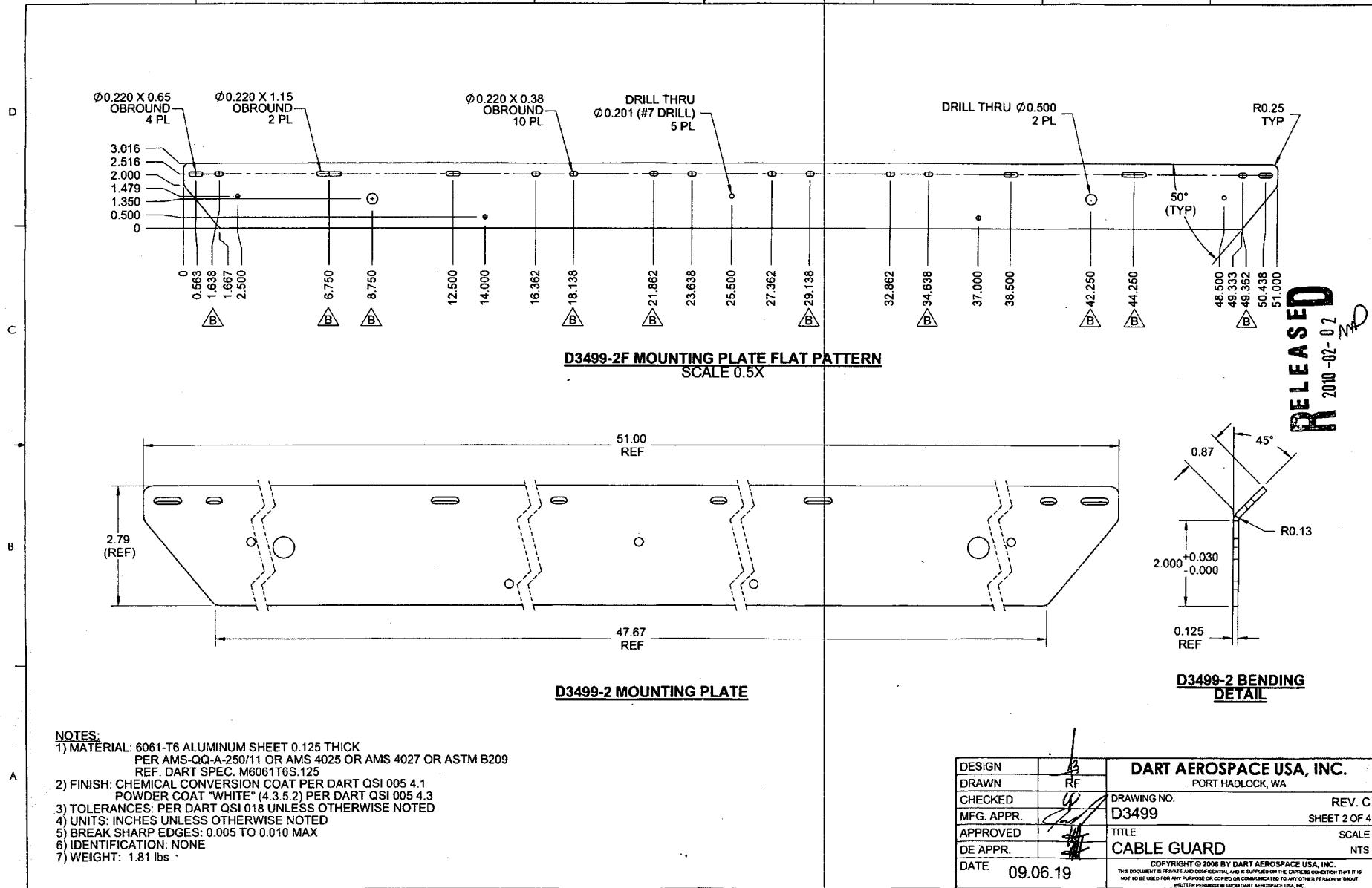
Work Order update only 

Work Order: _____	<b>DISPOSITION</b> <input type="checkbox"/> Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved	<b>AGAINST DEPARTMENT/PROCESS</b> <input type="checkbox"/> Skid-tube <input type="checkbox"/> Crosstube <input type="checkbox"/> Machining <input type="checkbox"/> Small Fab <input type="checkbox"/> Thermoforming <input type="checkbox"/> Finishing <input type="checkbox"/> Large Fab <input type="checkbox"/> Composite <input type="checkbox"/> Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier
Part No. _____		
NCR No. _____		

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY									
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function								
	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence								
	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge								
	<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled								
	<input type="checkbox"/> Other								
	<hr/>								
	<hr/>								
	<hr/>								
	<hr/>								
	<hr/>								
	<hr/>								
	<hr/>								
	<hr/>								
	<hr/>								

8 7 6 5 4 3 2 1



DESIGN	13	DART AEROSPACE USA, INC.
DRAWN	RF	PORT HADLOCK, WA
CHECKED	44	DRAWING NO.
MFG. APPR.		REV. C
APPROVED		SHEET 2 OF 4
DE APPR.		TITLE
DATE	09.06.19	SCALE
		CABLE GUARD
		NTS

COPYRIGHT © 2008 BY DART AEROSPACE USA, INC.  
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS  
NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT  
SPECIAL PERMISSION FROM DART AEROSPACE USA, INC.

DQA:

Date:



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date:

Work Order update only

Work Order: \_\_\_\_\_  
 Part No. \_\_\_\_\_  
 NCR No. \_\_\_\_\_

### DISPOSITION

- Rework
- Scrap
- Use-as-is
- Suspected Unapproved

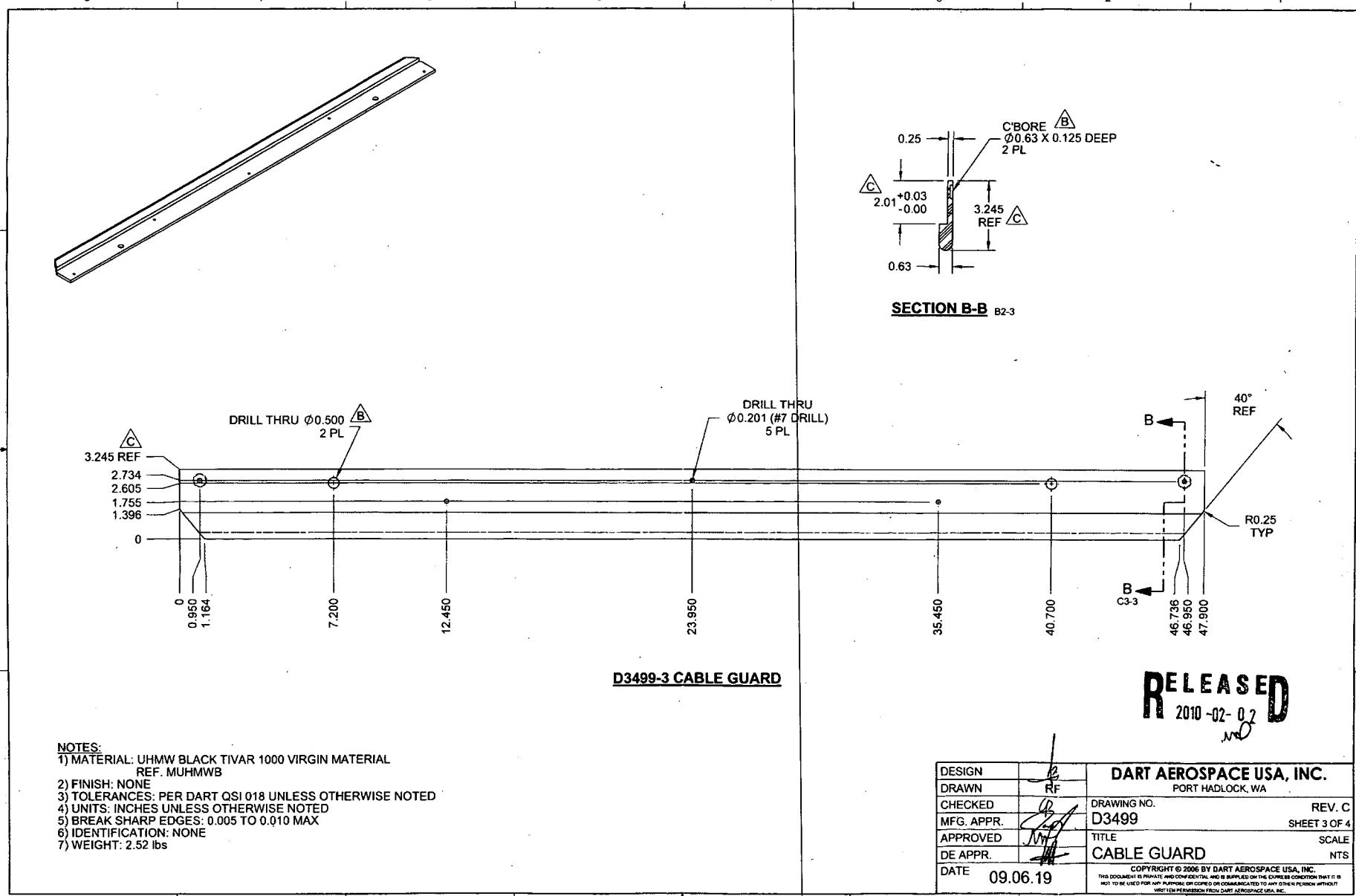
### AGAINST DEPARTMENT/PROCESS

Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

Landing Gear	General													
	<input type="checkbox"/>	Bending	<input type="checkbox"/>	Bend	<input type="checkbox"/>	Folio/Program	<input type="checkbox"/>	Outside Dimensions	<input type="checkbox"/>	Pressure/Forced				
	<input type="checkbox"/>	Centre Not Concentric	<input type="checkbox"/>	BOM/Route	<input type="checkbox"/>	Grain	<input type="checkbox"/>	Over/Under tolerance	<input type="checkbox"/>	Set-up				
	<input type="checkbox"/>	Cracks	<input type="checkbox"/>	Broken/Damage/Defect	<input type="checkbox"/>	Hardware	<input type="checkbox"/>	Part Incorrect	<input type="checkbox"/>	Temperature/Cure				
	<input type="checkbox"/>	Crimp/Kink/Ripple/Wave	<input type="checkbox"/>	Burrs	<input type="checkbox"/>	Inspection Incomplete/Unqualified	<input type="checkbox"/>	Part Lost/Missing	<input type="checkbox"/>	Weld				
	<input type="checkbox"/>	Cuffs	<input type="checkbox"/>	Contamination	<input type="checkbox"/>	Instructions Incomplete/Unclear	<input type="checkbox"/>	Part Moved	<input type="checkbox"/>	Wrong Stock Pulled				
	<input type="checkbox"/>	Crushing	<input type="checkbox"/>	Countersink	<input type="checkbox"/>	Misaligned/off center	<input type="checkbox"/>	Positioned Wrong	<input type="checkbox"/>	Other				
	<input type="checkbox"/>	Heat Treat	<input type="checkbox"/>	Cut Too Short	<input type="checkbox"/>	Mislabeled	<input type="checkbox"/>	Power Loss/Surge	<input type="checkbox"/>					
	<input type="checkbox"/>	Inspection Strip in Tube	<input type="checkbox"/>	Drawing	<input type="checkbox"/>	Misread	<input type="checkbox"/>		<input type="checkbox"/>					
	<input type="checkbox"/>	Marks/Chatter	<input type="checkbox"/>	Drill Holes	<input type="checkbox"/>	Off-set	<input type="checkbox"/>		<input type="checkbox"/>					
	<input type="checkbox"/>	Turning Sequence	<input type="checkbox"/>	Finish	<input type="checkbox"/>	Out of Calibration	<input type="checkbox"/>		<input type="checkbox"/>					
	<input type="checkbox"/>	Wave/Twist in Tube	<input type="checkbox"/>	Fit/Function	<input type="checkbox"/>	Out of Sequence	<input type="checkbox"/>		<input type="checkbox"/>					



DESIGN	12	DART AEROSPACE USA, INC.
DRAWN	RF	PORT HADLOCK, WA
CHECKED	SB	DRAWING NO.
MFG. APPR.	SB	REV. C
APPROVED	MM	SHEET 3 OF 4
DE APPR.	MM	TITLE
DATE	09.06.19	SCALE
		NTS

COPYRIGHT © 2006 BY DART AEROSPACE USA, INC.  
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS  
NOT TO BE USED FOR ANY PURPOSE OR COPIED OR DISCLOSED TO ANY OTHER PERSON WITHOUT  
WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

RELEASED  
2010-02-02  
NO

DQA: \_\_\_\_\_

Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_

Date: \_\_\_\_\_

Work Order update only 

Work Order: _____	<b>DISPOSITION</b>		
Part No. _____	Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>
NCR No. _____	Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Water Jet <input type="checkbox"/>
	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>
	Suspected Unapproved <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>
		Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>

### AGAINST DEPARTMENT/PROCESS

Engineering <input type="checkbox"/>
Quality <input type="checkbox"/>
Other <input type="checkbox"/>

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

<b>Landing Gear</b>	<b>General</b>															
	<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Folio/Program	<input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Pressure/Forced											
	<input type="checkbox"/> Centre Not Concentric	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Grain	<input type="checkbox"/> Over/Under tolerance	<input type="checkbox"/> Set-up											
	<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damage/Defect	<input type="checkbox"/> Hardware	<input type="checkbox"/> Part Incorrect	<input type="checkbox"/> Temperature/Cure											
	<input type="checkbox"/> Crimp/Kink/Ripple/Wave	<input type="checkbox"/> Burrs	<input type="checkbox"/> Inspection Incomplete/Unqualified	<input type="checkbox"/> Part Lost/Missing	<input type="checkbox"/> Weld											
	<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Instructions Incomplete/Unclear	<input type="checkbox"/> Part Moved	<input type="checkbox"/> Wrong Stock Pulled											
	<input type="checkbox"/> Crushing	<input type="checkbox"/> Countersink	<input type="checkbox"/> Misaligned/off center	<input type="checkbox"/> Positioned Wrong	<input type="checkbox"/> Other											
	<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Mislabeled	<input type="checkbox"/> Power Loss/Surge												
	<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Drawing	<input type="checkbox"/> Misread													
	<input type="checkbox"/> Marks/Chatter	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Off-set													
	<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Calibration													
	<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Fit/Function	<input type="checkbox"/> Out of Sequence													

8

7

6

5

4

3

2

1

D

D

C

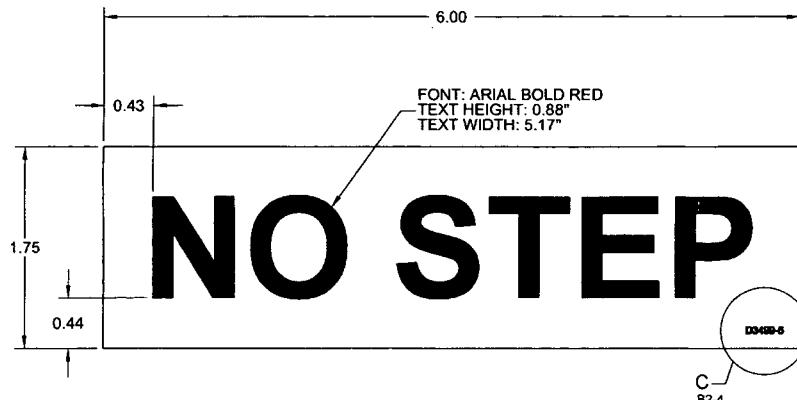
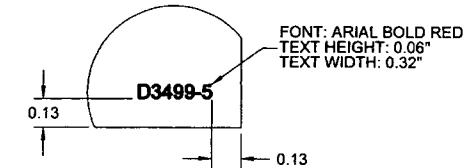
C

B

B

A

A

D3499-5 PLACARDDETAIL C B5-4  
SCALE 2X

RELEASED  
2010-02-03  
WWS

## NOTES:

- 1) MATERIAL: RED LETTERS ON WHITE ADHESIVE BACK VINYL  
MANUFACTURED FROM 3M 7 MIL MASKING FILM #8522CP OR  
AVERY IPM #2031. SIZE IS 6.00" LONG" x 1.75" WIDE
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: N/A

8

7

6

5

4

3

2

1

DESIGN	15	DART AEROSPACE USA, INC.
DRAWN	RF	PORT HADLOCK, WA
CHECKED	PP	DRAWING NO.
MFG. APPR.	JL	REV. C
APPROVED	JL	SHEET 4 OF 4
DE APPR.	JL	TITLE
DATE	09.06.19	SCALE
		CABLE GUARD
		NTS

COPYRIGHT © 2005 BY DART AEROSPACE USA, INC.  
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS  
NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT  
WRITTEN APPROVAL FROM DART AEROSPACE USA, INC.

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Date:



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Date:

## Work Order update only

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS						
Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>				Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>		Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>		Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>		Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>		
Root Cause		Date	Step	Qty	Description of work order update or non-conformance		Initial Chief Eng	Action Description		Sign & Date	Verification	QC Inspector
Design	<input type="checkbox"/>											
Doc/Data	<input type="checkbox"/>											
Equip/Tooling	<input type="checkbox"/>											
Handling/Pre	<input type="checkbox"/>											
Material	<input type="checkbox"/>											
Operator	<input type="checkbox"/>											
Offset/Setup	<input type="checkbox"/>											
Process	<input type="checkbox"/>											
Supplier	<input type="checkbox"/>											
Training	<input type="checkbox"/>											
Transport	<input type="checkbox"/>											
Unapproved	<input type="checkbox"/>											
FAULT CATEGORY												
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function		<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence		<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled		
<input type="checkbox"/> Other												